

Title (en)

Piston ring for combustion engine

Title (de)

Kolbenring für Brennkraftmaschinen

Title (fr)

Segment de piston pour moteur à combustion

Publication

EP 0949436 A2 19991013 (DE)

Application

EP 99103759 A 19990226

Priority

DE 19815484 A 19980407

Abstract (en)

A piston ring (1) made of a ductile, plastically formable material (in particular, iron or steel), has peaks of surface roughness on its faces (2) (or flanks) oriented perpendicular to the ring axis. These peaks are flattened by plastic cold forming in such a way that the resultant surface roughness Rz is less than or equal to 2 microns, and a hardened boundary layer is produced. An independent claim is given for a method of production of the piston ring. The method involves machining to produce the ring faces (2) with a surface roughness Rz in excess of 2 microns, and subsequent cold rolling by means of a roll (5) at a specified speed to flatten the roughness peaks of the machined surfaces.

Abstract (de)

Die Erfindung betrifft einen Kolbenring 1 sowie Verfahren zu seiner Herstellung. Der Kolbenring 1 besteht aus duktilem, plastisch verformbarem Werkstoff und weist Stirnflächen 2 auf, die durch einen Rolliervorgang geglättet sind, so daß eine Bautiefe Rz \leq 2 μ m erzeugt ist. <IMAGE>

IPC 1-7

F16J 9/26

IPC 8 full level

C21D 7/04 (2006.01); **F16J 9/22** (2006.01)

CPC (source: EP)

C21D 7/04 (2013.01); **F16J 9/22** (2013.01)

Citation (applicant)

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CN104937319A; JP2016504544A; RU2633734C2; US9719596B2; WO2014108226A1

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